CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

SECRET

SECURITY INFORMATION

COUNTRY	USSR	REPORT	25X1
SUBJECT	Literature Dealing with Television	DATE DISTR.	11 March 1953
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This is UNEVALUATED Information

THE SOURCE EVALUATIONS IN THIS REPORT ARE DEFINITIVE.
THE APPRAISAL OF CONTENT IS TENTATIVE.
(FOR KEY SEE REVERSE)

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1. Limited editions of technical books were available in the USSR; only approximately 1500 were for sale in bookstores. Three thousand books, representing the balance of some 4000-5000 published books, were distributed to the libraries or manufacturing plants in the Soviet Union.

2. The following is a list of technical publications and articles currently used at Institute 380 25X1

25 YEAR RE-REVIEW

SECRET

STATE	x #	ARMY	x #	NAVY	x #	AIR	x #	FBI		AEC	OSI P&E Ev	x		

(Note: Washington Distribution Indicated By "X"; Field Distribution By "#".)

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[redacted] The first five books listed [redacted] are the only ones which the Soviets recommend for use in their educational institutions.

a. Compilation by the Central Bureau of Technical Information - Collection of Radio Technical Problems, 1947

This book, edited annually, is a collection of radio technical developments discovered and analyzed during the year.

b. Kubarkin and Enutin, How to Build a Detector Receiver, 1948

Written for use in constructing a primitive detector radio receiver without tubes.

c. Sutiyagin, V.Ya., Amateur Television Receivers, 1952

This book includes a description of how to construct a television receiver using the frequency for channel 1 (49.75 mc for picture and 56.25 for voice). The operation is based on a minimum of tubes and for a distance of not more than 15 or 20 kilometers from the transmitting station. This receiver does not utilize an intermediate frequency. The recommended screen radius for the kinescope circular tube is nine inches.

d. Weinstein, S S, and Konashinsky, S A, Lessons and Examples for Radio Amateurs, 1951

e. Vovchenko, V. S. How to Build Your Own Amateur Television Transmitter Station, 1951

As stated in this book, television frequencies have been designated for use by amateurs. (It is of interest that the Soviets encourage television amateurs but not radio amateurs. Apparently, they reason that the medium of television is more desirable since it is more controllable. Conceivably, radio amateurs could be exposed to propaganda from all over the world. However, radio literature is disseminated and its reading is encouraged by the Soviets so that, in the event of hostilities, many would be prepared to work in a factory producing electronic equipment.) This book includes a description of how a group of television amateurs could operate the station located in Kharkov, USSR, and how any group could build such a transmitting station in any city. The designated frequencies could then be assigned for their use. These frequencies as described on page ten of this book are:

Channel 1 49.75 mc for the picture; 56.25 mc for voice

Channel 2 59.25 mc for the picture; 65.75 mc for voice

Channel 3 77.25 mc for the picture; 83.75 mc for voice

The described frequencies are presently in use in Moscow, Leningrad, Kiev, and Kharkov. The following television receivers are made for operation on these frequencies:

Receiver	Description
Moskvich, T-1	Made for channel 1
Leningrad, T-1	Made for channel 1

25X1

Receiver	Description
KVN-49-4	Made for channels 1, 2, and 3; this is the latest type (a description appears in the Soviet magazine Radio, Issue No 4, April 1952),
Leningrad, T-2	A receiver made for channels 1, 2, and 3; this is the most sensitive type.

The Soviets encourage the use of Moskvich and Leningrad receivers because these types are more available on the market. amateur groups may have built other stations. The amateur group at the army school at Odessa, USSR, purchased two "Tonne" cameras in order to set up a television transmitting station.

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f. Berns and Gardner, Changing Functions in Lineal Systems

Russian translation from the American edition, 1951; second edition, 3000 copies.

g. Bode, G, Networks Analysis and Feedback Amplifier Design, New York, 1946

Russian translation, 1948

h. Bromwell, A., "New Viewing Tube for Color Television -- The Chronoscope", Television Techniques, Vol 7, p 40-41, March 1948

i. Butler, F, "Rectifier Voltage Control Using Saturable Care Reactors", June 1949, Wireless World

j. Byalik, T I, Wide Band Amplifiers, Moscow, 1951

k. Chance, Hughes, et al, Wave Forms, MIT Radiation Laboratory Series

l. Chance, Hulsizer, et al, Electronic Time Measurements, MIT Radiation Laboratory Series

Russian translation 1951; two volumes

m. Cherry, C, Pulses and Transients in Communication Circuits

Russian translation, 1951

n. Clark, E L, "Automatic Frequency Phase Control", May 1949, Proceedings of IRE

o. Close, R H, and Lebann, M T, "Design of Phontastron Time Delay Circuits", April 1948 issue of Electronics magazine.

p. Deresch and Goldmark, "The Quality of Television Pictures", Journal of the Society of Motion Picture Engineers, 1940

q. DuMont Co, "Film Pick-up System", March 1948 issue of Frequency Modulation and Television

Soviet design engineers were very interested in this article.

r. Easton, A, and Odessey, "Counter-Circuits for Television", May 1948 issue of Electronics

s. Ecwilbur and Fawankel, "How NBC Uses the RCA Image Orthicon Camera", September 1947, Broadcast News

t. Elyashkevich , S A, Commercial Television Receivers and Their Operation, 1951

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u. Elmor and Sands, Electronics Experimental Techniques, New York, 1949
Russian translation published 1951

v. Elyashkevich, S A, Commercial Television Receivers and Their Exploitation, Moscow, 1951
Contains tables of basic characteristics of all Soviet commercial television receivers and circuit diagrams of T-1, T-2 and KVN-49 television receivers.

w. Emde and Janke, Tables of Functions, Formulas, & Curves 2nd edition '49

x. Epstein, D W (an RCA engineer), "Photometry in Television Engineering", July 1948 issue of Electronics

y. Fredendall and Kell, "Standardization of the Transient Response of Television Transmitters", 1949, RCA Review, No 1

z. Foster, H, "6000-Megacycle Television Relay System", January 1949, Electronics

aa. Friedman, B A, "Corona Tube Regulators for High Voltage", December 1949, Electronics

bb. Friend, A W, "Molded Iron Dust Cores for Use in Horizontal Deflection Circuits", 1947, RCA Review, Vol VIII, No 1

cc. Fuks, B A, and Lewin, V I, Changing Complex Functions and Their Application

dd. Genie, Civil, "France's Television Transmitter in Mon Rouge" 1947 (1000 lines and 15 mc)

ee. Goloschmier "Advances in Television for Ultra-High Frequency", May 1949, Frequency Modulation and Television

ff. Harvey, F W, and Hilbroh, E D, "The WMAL-Television Mobile Unit" March 1949, Communication

gg. Helterline, Leo, "Diode-Controlled Voltage Regulators", June 1947, Electronics

hh. Jurtschenko, W P, Principles of Television, 1951

ii. Karsloy and Yaeger, Operational Methods in Applied Mathematics, 1941, Russian translation 1948; authors are American

jj. Katayev, S N, Impulse Generators for Television Scanning, Moscow, 1951

kk. Katayev, SI(N?), Impulse Generators for Television Purposes, 1951

ll. Kell, R D, "Synchronization of Television Stations", February 1949, Electronics

mm. "Description of Television Stations from New York City to Schnectady", May 1949, Electrical Engineer

nn. Kiver, Milton S, Radio & Television News, Nov '48 (Writers American; material always translated into Russian)

oo. Kornienko, A J, Amateur Television Receivers, 1951

pp. Krilov, N N, Impulse Technic, Moscow, 1950

qq. Kruelov, A N, A Course in Approximate Calculations, 1951
(Calculation of an equation of the 5th power)

rr. Kruelov, N N, Impulse Technology, 1950
This book was constantly used as a reference on blocking generators.

ss. Kurosch, A G, Course in Higher Mathematics, 1950

tt. Lavrentev, M A, and Schabat, B W, Methods in the Theory of Changing Complex Functions, 1951

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uu. Masel, K B, Rectifiers and Voltage Stabilizers, 1951

vv. Middleton, P, Journal of Applied Physics, April 1949 issue

ww. Pooh, W J, and Shepard, H C, "The RCA Type TJ-50A Television Mobile Unit", September 1947, Broadcast News

xx. Ramsey, W S, "Variable High Voltage Power Source", February 1950, Electronics

yy. Rand, P S, "Minimizing Television Interference", June 1949, Electronics

zz. Ridenour, Radar System Engineering
Russian translation, 1951

aaa. Riskin, A A, Theoretic Principles of Amplifier Circuits, 1951

bbb. Roe, John H, "New Television Field Pick-up", Proceedings of IRE, December 1947

ccc. Schade, Otto H (an RCA engineer), "Magnetic Deflection Circuit for Cathode Ray Tubes", September 1947, RCA Review
"Electro-Optical Characteristics of Television", March 1948 issue of RCA Review, Vol II, No 1

ddd. Schlesinger, Kurt, "Anastigmatic Yoke for Picture Tubes", October 1949, Electronics

eee. "Locked Oscillator for Television Synchronization", January 1949, Electronics

fff. "Built-in Antennas for Television Receivers", 1950, Electronics

ggg. Schultz, T S (television engineer for General Electric Co), "Radio and Electronic Engineering - Television Stabilizing Amplifier", May 1949 issue of Radio and Television News

hhh. Secor, H W, "Electronic Magic", June 1949, Radio-Electronics

iii. Shelby, "Experience with Portable Television Broadcast Equipment", August 1944, Broadcast News

jjj. Smith, H R, and Gregory, G S, "Film Pick-up System", March 1948, Frequency Modulation and Television

kkk. Stekolnikov, I S, "Electronic Oscillographs for Short Time Processes," 1951

lll. Taylor, J P, "Camera Placement and Switching for Baseball Broadcasting", September 1947, Broadcast News

mmm. Teumin, I I, Reference Book of Transition Processes, Moscow, 1951
Constantly referred to by Soviet electronics engineers; reflects the fact that the Soviets are more advanced mathematically than any other country. [redacted] 25X1
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nnn. Townsend, C L, "The Clamp Circuit", February - March 1945 issue of Broadcasting Engineering Journal

ooo. Turner, A H, "Artificial Lines for Video Distribution and Delay", April 1949, RCA Review

ppp. Tyminski, Walter V, "Wide Band Chain Amplifier for Television", 1950, Radio and Television News
The Soviets are very familiar with this circuit.

qqq. Valik, G I, Wide Band Amplifiers, 1951

rrr. Valley and Wallman, Tube Amplifiers, MIT Radiation Laboratory Series, Volume II only; Russian translation published 1951.
Cathode Ray Tube Displays, MIT Radiation Laboratory Series, Russian translation '51, Vol I. Electronic ray tubes and indicating devices; oscilloscopes (electron gun types).

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sss. Vin Zeluff, "Television Remote Viewer", December 1948, Electronics

ttt. Wein, A, "Natural Color Television System", March 1949 issue of Radio and Television News

uuu. Wendt, K R, "T V D C Component", January 1948 issue of RCA Review

vvv. Yurchenko, V P, First Book on Television, Moscow 1951

www. Zaharis, G "Television Synchronizing Generator", May 1950 Electronics

xxx. Zeidler, H M, and Noe, "Pentriode Amplifiers", November 1948 issue of Proceedings of Institute of Radio Engineers

yyy. "A Six-Megacycle Compatible High Definition Color Television System", December 1949 issue of RCA Review

zzz. "Color Measurements", May-June 1949 issue of Proceedings of IRE

aaaa. "Color Television System", January 1950, Electronics

bbbb. "Dumont Broadcast Equipment with Two Cameras, Each Having Image-Orthicon Tube", March 1948, Electronics

cccc. "House Projection Television", Parts I, II, and III, March 1948, Proceedings of IRE

dddd. "Illumination for Television Studios", September 1949, Television Techniques

eeee. "Image Orthicon", May 1949, Electronic Engineer

ffff. "NBC and Madison Square Garden", April 1945, Television, Vol II

gggg. "New Direction in Color Television", December 1949 issue of Electronics

hhhh. "New Equipment at Associated Press - London", July 1949, Wireless World

iiii. "Optimum Coax Diameters for Gas-filled Cables", February 1950, Electronics

jjjj. "Radio Frequency and Television Cable Polythene", June 1949, Wireless World

kkkk. "RCA Three-Color Television Tube", May 1950 issue of Electronics

llll. Saw Tooth Generators - Russian translation published 1951; two volumes

mmmm. Tables of Integrals, Sums and Columns, 1951

nnnn. "Television Operations in Small Cities", June 1949, Frequency Modulation and Television

oooo. The Journal of the British Institute of Radio Engineers, May 1949

pppp. "The Transistor, a Crystal Triode", September 1948 issue of Electronics

qqqq. "The WOW--Television Field Car", April 1949, Communication

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a. Devore, Henry B, "Limiting Resolution in an Image Orthicon Type Pick-up Tube", March 1948, Proceedings of IRE

b. Forgive, Goodrich, and Weimer, "The Vidicon Photo Conductor Camera Tube", May 1950, Electronics

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d. Handel, R R, James, R B, and Johnson, R E, "A New Image Orthicon" December 1949, RCA Review

e. Heimann and Wemheuer, "Electrical Communication Technology", Vol 15, 1938, Supericonoscopes

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g. Low, H B, and Weimer, P K, "The Image Orthicon and Sensitive Television Pick-up Tube", Proceedings of IRE, Vol 34, No 7 (pp 424-432)

h. Pensak, L, "Picture Storage Tube", July 1949, Electronics

i. Roe, T H, "Image Orthicon Field Equipment", June 1947, Broadcast News

j. "The Soviet Super Emitron", 1947

This article appeared in a Leningrad electrical institute's publication and was written by Prof Dr Shmakov.

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